

# A new species of *Lissanthe* R.Br. (Epacridaceae) from Queensland

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## Summary

Bean, A.R. (2001). A new species of *Lissanthe* R.Br. (Epacridaceae) from Queensland. *Austrobaileya* 6 (1): 99-102. *Lissanthe brevistyla*, a new species from the serpentinite deposits near Rockhampton, is described and illustrated. It is compared to related taxa, and notes on the conservation status are provided.

Key words: *Lissanthe brevistyla*, *Lissanthe*, Epacridaceae, serpentinite, Queensland flora, taxonomy.

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## Introduction

The serpentinite geological deposits near Marlborough, north of Rockhampton contain a high proportion of rare or endemic plant species, some of which are very restricted in distribution (Batianoff *et al.* 2000). The species under consideration here came to notice only recently, and only after a mining lease had been established over the area of its occurrence.

A revision of the whole of Epacridaceae is being undertaken at the National Herbarium of New South Wales by Elizabeth Brown and colleagues. Since the results of this revision are some years away, the opportunity is taken here to describe this rare Queensland epacrid.

The new species shares with *Lissanthe* R.Br. the following features: spicate inflorescence on terminal growth (not on old wood), with flowers subtended by a solitary persistent bract and two bracteoles; the bracteoles somewhat removed from the sepals; the inner surface of the corolla tube glabrous in the lower half, but hairy towards the throat; the corolla lobes valvate in bud; and the 5–7-locular drupaceous fruits.

The generic placement is not certain, as this taxon belongs to a group of closely related genera that include *Lissanthe*, *Cyathodes s. lat.*, *Acrotriche* and some *Leucopogon* spp. (Brown and Crayn, pers. comm.). The pedicel lacks the degree of elongation usually associated with species of the genus *Lissanthe*, and the filaments

are unusually wide and thick (Fig. 1c, 1d).

The only other Queensland taxon currently ascribed to *Lissanthe* is *L. strigosa* subsp. *subulata* (R.Br.) J.M.Powell (Powell & Wiecek 1994). However, Powell (1992) foreshadowed the transfer of some species of *Leucopogon* R.Br. to *Lissanthe*, namely *Leucopogon pedicellatus* and *L. pleiospermus*. Determinavit slips at BRI annotated by Powell indicate a similar position for *Leucopogon pluriloculatus*. While these species have the densely hairy corolla lobes, traditionally indicative of *Leucopogon*, they otherwise conform to the characteristics of *Lissanthe*.

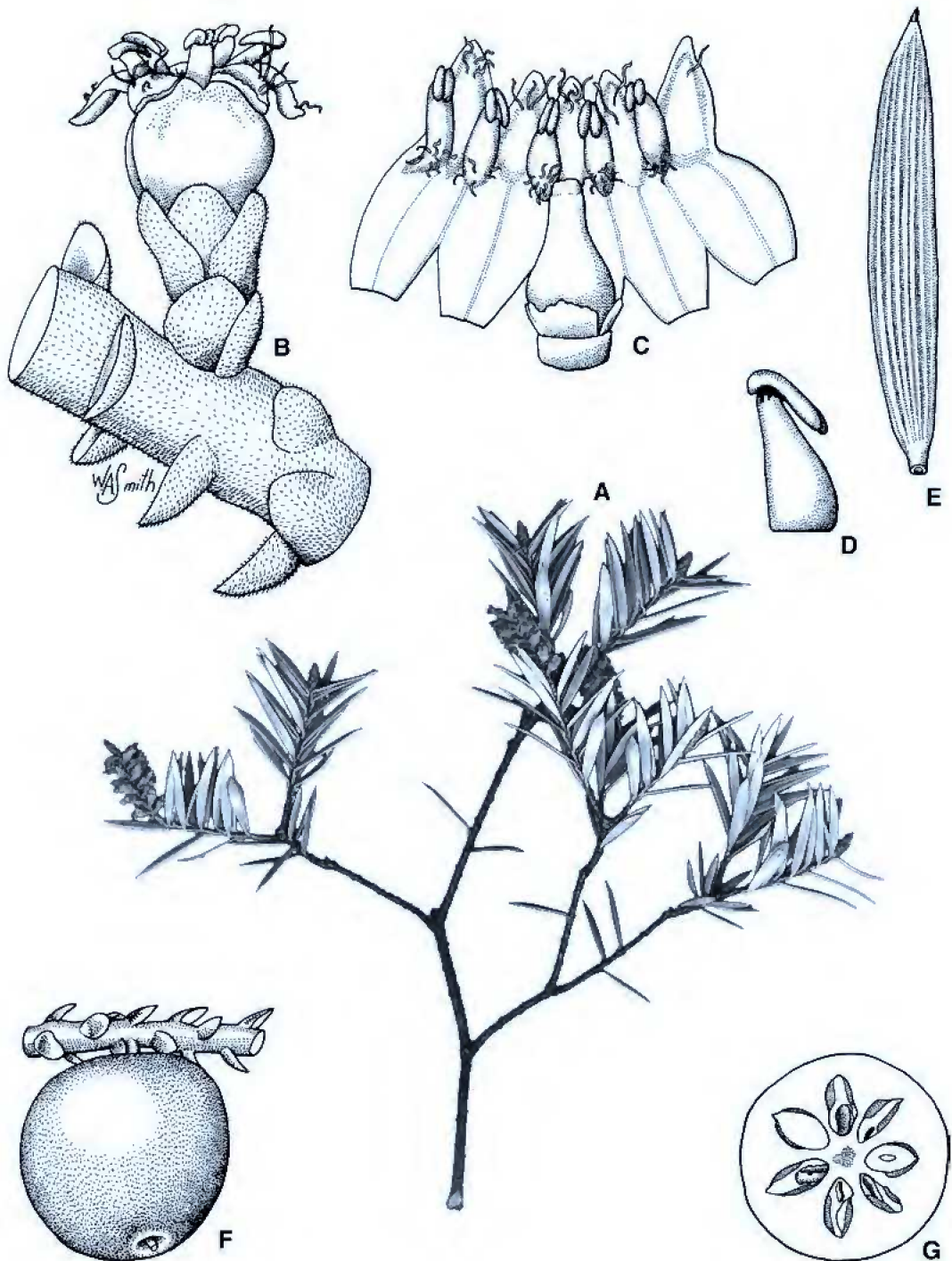
## Taxonomy

***Lissanthe brevistyla* A.R.Bean sp. nov.** affinis

*L. strigosae* autem inflorescentia terminali spicata, pedicellis brevioribus, stylo ovarioque glabro, fructibus grandioribus purpureocyaneis differt.

**Typus:** Queensland. PORT CURTIS DISTRICT: Gumigil Mining Lease, 16.5 km and 189° from Marlborough Motel on Bruce Highway, 17 November 1999, I.G. Champion 1569 & B. Tangey (holo: BRI; iso: NSW).

Spreading shrub to 1.5 m high and 2.5 m across. Branchlets puberulous. Leaves lanceolate to narrowly lanceolate, 10–25 × 1.8–3 mm, glabrous, dark green and flat to convex above, whitish below, usually 7-veined, tapering into a pungent point 0.8–1.3 mm long, margins



**Fig.1.** *Lissanthe brevistyla*. A. flowering branchlet  $\times 0.8$ . B. side view of flower showing the persistent bract (each subtending a flower), one (of two) bracteoles, sepals and corolla tube  $\times 16$ . C. internal view of flower  $\times 16$ . D. lateral view of stamen  $\times 32$ . E. leaf, abaxial surface  $\times 4$ . F. mature fruit  $\times 4$ . G. transverse section of endocarp of fruit  $\times 8$ . A, *Champion* 1570 & *Tangey*; B–E, *Champion* 1554 & *Tangey*; F, G, *Champion* 1565 & *Tangey* (all BRI). Del. W. Smith.

entire, 7–9 vascular bundles per leaf; petiole 0.8–1.5 mm long. Inflorescence a dense auxotelic spike, up to 25 mm long, comprising 18–26 bisexual flowers, in the axils of the uppermost leaves or apparently terminal. Rachis puberulous. Pedicels obscure. Subtending bract orbicular, c. 1 × 1 mm, sparsely puberulous to glabrous, persistent. Bracteoles 2, persistent, 0.7–1.1 mm long, keeled, obtuse, ciliolate, placed just below but not or scarcely overlapping the sepals. Sepals 5, imbricate, broadly ovate, 0.5–1 mm long, 0.5–0.8 mm wide, apex obtuse, margins ciliolate. Corolla white or pink; tube urceolate, 1.8–2.6 mm long, far exceeding sepals, glabrous externally, with long, flexuose, very sparse to moderately dense hairs internally towards distal end; lobes 5, valvate in bud, triangular, 0.7–0.9 mm long, acute, spreading or recurved, glabrous externally, with long, flexuose, sparse hairs on inner surface. Stamens 5, alternating with corolla lobes. Filaments 0.4–0.5 mm long, 0.25–0.3 mm wide and thick, hairy at base. Anthers free, brown, 0.4–0.6 mm long, slightly exserted from corolla tube, dorsifixed, attached above their middle onto the filaments. Ovary glabrous, 6 or 7-locular, each locule containing 1 ovule. Style terminal on the ovary summit, terete, 0.5–0.7 mm long, much shorter than corolla tube; stigma small. Mature fruits globose to depressed-globose, 4–6 mm long, 4–6.5 mm diameter, smooth (when fresh), style persistent, pedicel 1–1.5 mm long; pericarp glabrous, purple-blue in colour; mesocarp fleshy; endocarp woody, ribbed, not separating into pyrenes. Fig. 1.

**Specimens examined:** Queensland. PORT CURTIS DISTRICT: SF 114, site 4, Mt Fairview, 65 km NW of Rockhampton, Dec 1998, *Batianoff* 981222 *et al.* (BRI); Poachers Gully, Gumigil Mining Lease, 16.2 km and 185° from Marlborough Motel on Bruce Highway, Nov 1999, *Champion* 1544 & *Tangey* (BRI); ‘Magpie’, 17.6 km and 171° from Marlborough Motel on Bruce Highway, Nov 1999, *Champion* 1554 & *Tangey* (BRI, MEL); ‘Currawong’ on Gumigil’s Ramilies Lease, 19.4 km and 167° from Marlborough Motel on Bruce Highway, Nov 1999, *Champion* 1557 & *Tangey* (BRI, CANB); Gumigil Mining Lease, 16.5 km and 189° from Marlborough Motel on Bruce Highway, Nov 1999, *Champion* 1570 & *Tangey* (BRI); Marlborough Ck, 25 km SW of Marlborough, Nov 1997, *McCabe s.n.* (BRI).

**Distribution and habitat:** Endemic to the Marlborough area of central coastal Queensland. It is confined to steep hillsides in woodland dominated by *Eucalyptus fibrosa* F.Muell. and *E. xanthope* Brooker & A.R.Bean, and may be associated with other shrub species such as *Hakea trineura* F.Muell., *Pimelea leptospermoides* F.Muell. and *Leucopogon cuspidatus* R.Br. It grows in red gravelly soil or on stony scree, derived from ultramafic rocks.

**Phenology:** Flowers and fruits are recorded for November.

**Affinities:** *L. brevistyla* differs from *L. strigosa* ssp. *subulata* by its almost sessile flowers, shorter style (relative to corolla tube length), the larger purple-blue fruits (small and white for *subulata*), and glabrous style and ovary (densely hairy for *subulata*).

Of the species currently under *Leucopogon*, *L. brevistyla* most resembles *Leucopogon pedicellatus*, as they both have a glabrous style and ovary, and a style shorter than the corolla tube. However, *L. pedicellatus* has longer pedicels, and much longer and more pilose corolla lobes.

**Conservation status:** Applying the criteria of the IUCN (Anon. 1994), a category of ‘vulnerable’ is proposed (Criteria B1, B2 (b, c)).

**Notes:** This species is undoubtedly lignotuberous, as it grows in a very fire-prone area. It may spread vegetatively (by rhizomes), as dense clumps covering more than 10 m<sup>2</sup> have been observed (I. Champion pers. comm.).

**Etymology:** From the Latin *brevi-* short and *stylus-* style, referring to the style which is shorter than in related species.

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